

We claim:

1. A method of processing a message received at a user equipment in a UMTS communications system, wherein the message includes a Ciphering Mode Info information element and is one of a plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message, the method comprising:

determining whether a Ciphering Activation Time for DPCH information element is present in the message when radio bearers exist using radio link control (RLC) transparent mode (TM); and

in the event that the Ciphering Activation Time for DPCH information element is not present, returning a message indicating the absence of the information element.

2. A method according to claim 1, wherein the step of returning a message indicating the absence of the Ciphering Activation Time for DPCH information element comprises returning a message including the value INVALID_CONFIGURATION.

3. A method according to claim 1, wherein the step of returning a message indicating the absence of the Ciphering Activation Time for DPCH information element comprises returning a message including the value UNSUPPORTED_CONFIGURATION.

4. A method of preparing a message for transmission to a user equipment in a UMTS communications system, the message including a Ciphering Mode Info information element, the method comprising determining whether radio bearers exist using radio link control (RLC) transparent mode (TM); and

5 if they do exist, determining whether the message is one of a plurality of message types for which a Ciphering Activation Time for DPCH information element is to be included, the plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update
10 Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message; and

in the event the message is one of said plurality of message types, including the Ciphering Activation Time for DPCH information element in the message.

5. A method of processing a message received at a user equipment (UE) from a UTRAN in a UMTS communications system, wherein the message includes a Ciphering Mode Info information element and is one of a plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message, the method comprising:

determining whether a Ciphering Activation Time for DPCH information element is present in the message when radio bearers exist using radio link control (RLC) transparent mode (TM); and

in the event that the information element is not present, selecting an activation time for applying ciphering changes for the transparent mode radio bearers.

6. A method according to claim 5, wherein the step of selecting the activation time for applying ciphering changes comprises using a message activation time received from the UTRAN.

7. A method according to claim 6, wherein the message activation time is included in the Activation Time information element.

8. A method according to claim 7, comprising, in the absence of the Activation Time information element, using an activation time of NOW.

9. A method according to claim 5, wherein the step of selecting an activation time comprises selecting an activation time at the UE independently of the UTRAN and sending a response message including the selected activation time to the UTRAN.

10. A method according to claim 9, comprising returning the selected activation time using the COUNT-C Activation Time information element.

11. A method according to claim 9, further comprising using the selected activation time at the UE as the time for applying ciphering changes for transparent mode radio bearers.

12. A method according to claim 11, further comprising receiving the selected activation time at the UTRAN and using the received activation time as the time for applying ciphering changes for transparent mode radio bearers.

13. A method according to claim 5, comprising selecting an activation time of NOW to immediately apply ciphering changes for transparent mode radio bearers.

14. User equipment for receiving a message in a UMTS communications system, wherein the message includes a Ciphering Mode Info information element and is one of a plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message, the user equipment comprising:

a control module configured to determine whether a Ciphering Activation Time for DPCH information element is present in the message when radio bearers exist using radio link control (RLC) transparent mode (TM); and

a transmitter for returning a message indicating the absence of the information element, in the event that the Ciphering Activation Time for DPCH information element is not present.

15. A UTRAN for transmitting a message to a user equipment in a UMTS communications system, the message including a Ciphering Mode Info information element, the UTRAN comprising:

a control module for determining whether radio bearers exist using radio link control (RLC) transparent mode (TM);

the control module further being configured to determine, in the event that said radio bearers exist, whether the message is one of a plurality of message types for which a Ciphering Activation Time for DPCH information element is to be included, the plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message; and

the control module being configured to include the Ciphering Activation Time for DPCH information element in the message in the event that the message is one of said plurality of message types.

16. User equipment (UE) for receiving a message from a UTRAN in a UMTS communications system, wherein the message includes a Ciphering Mode Info information element and is one of a plurality of message types comprising a Radio Bearer Setup message, a Radio Bearer Reconfiguration message, a Radio Bearer Release message, a Transport Channel Reconfiguration message, a Physical Channel Reconfiguration message, a Cell Update Confirm message, a URA Update Confirm message and a UTRAN Mobility Information message, the user equipment comprising:

a control module for determining whether a Ciphering Activation Time for DPCH information element is present in the message when radio bearers exist using radio link control (RLC) transparent mode (TM);

the control module being configured to select an activation time for applying ciphering changes for the transparent mode radio bearers, in the event that the information element is not present.